

-16-

ABSTRACT

An aerospace housing and shaft assembly comprising  
a housing, a shaft rotatably mounted within the housing,  
a seal assembly operatively positioned between the  
housing and the shaft, and low pressure air (e.g.,  
5 atmospheric air) having a pressure substantially less  
than 14 psia and being positioned on one side of the seal  
assembly. The seal assembly includes a first seal ring  
mounted on the housing, and a second seal ring mounted on  
the shaft in facing relation to the first seal ring. One  
10 of the first seal ring and the second seal ring includes  
a hydropad. The hydropad is positioned to pump low  
pressure air from the inner diameter toward the outer  
diameter. The hydropads can include an inner edge  
15 oriented substantially circumferentially, an outer edge  
oriented substantially circumferentially and spaced  
radially outward from the inner edge, a leading edge  
interconnecting the inner edge with the outer edge, and  
a trailing edge interconnecting the inner edge with the  
20 outer edge.